

6 Oxidation number and redox — Part 1

— Answers

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Work through these after trying the questions yourself.

6.1 (a) 0 \ (b) -2 .

6.2 Oxidation Is Loss (of electrons), Reduction Is Gain.

6.3 Two oxygens give -4 ; the molecule sums to 0, so sulfur is $+4$.

6.4 Three oxygens give -6 ; the ion is -1 , so nitrogen $+(-6) = -1$, giving nitrogen $= +5$.

6.5 Zinc (it loses electrons; its oxidation number rises from 0 to $+2$).

6.6 It takes electrons from the other species, and gaining electrons is reduction.

6.7 Seven oxygens give $7 \times (-2) = -14$. The ion's total charge is -2 , so $2\text{Cr} + (-14) = -2$, giving $2\text{Cr} = +12$ and chromium $= +6$.